

## ABSTRACT

Disclosed are methods for assessment of the ability of substances to ameliorate the toxic-effects of compounds based on a lymphocyte culture assay. The lymphocyte assay is a repeatable and quantitative assay for lymphocyte growth in a chemically defined media in which specific compounds with potential toxicity and substances with potential abilities to ameliorate the toxicity can be added to determine specific and individualized requirements for such substances. Also disclosed are methods for ameliorating side-effects by administering to a patient undergoing therapy with a drug that has a toxic-effect, a substance identified by the methods of the invention. Further provided is a composition that ameliorates the toxic-effect of the statin family of drugs. Methods and processes for partially purifying and/or isolating this composition are also provided. Thus, the methods of the invention not only provide substances for reversal of compound-toxicity but also provide methods for pre-approving compounds for human use.